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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,797	04/27/2001	Koichiro Tanaka	12732-034001	7383
26171	7590	06/10/2005	EXAMINER	
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			GUERRERO, MARIA F	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/842,797

Applicant(s)

TANAKA, KOICHIRO



Examiner

Maria Guerrero

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 31-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is in response to Request for reconsideration filed March 23, 2005.

### **Status of Claims**

2. Claims 1-52 are pending.

### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

4. The information disclosure statement filed March 23, 2005 has been considered.

### ***Election/Restrictions***

5. Newly submitted claims 31-52 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the claims required irradiating with a first and second laser beams.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 31-52 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-18 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (U.S. 5,365,080) in view of G. Andra et al. and Applicant admitted prior art.

Yamazaki et al. teaches forming a first crystalline region by irradiating laser beam to an amorphous semiconductor film while relatively moving the laser beam with respect to the amorphous semiconductor film and after forming the first crystalline region forming a second by irradiating laser beam to an amorphous semiconductor film while relatively moving the laser beam with respect to the amorphous semiconductor film (Fig. 4(A)-4(E), col. 2, lines 20-35, col. 4, lines 50-68). Yamazaki et al. shows the second crystalline region including a portion of the first crystalline region and the second crystalline region overlaps with the first crystalline region (Fig. 4(B)-4E, col. 4, lines 65-68, col. 5, lines 1-5). Yamazaki et al. teaches employing a YAG laser or argon laser to crystallize the semiconductor film (col. 5, lines 1-5, col. 6, lines 1-10). In addition, Yamazaki et al. teaches the semiconductor device being used in a liquid crystal display device and other devices (col. 1, lines 9-13).

Yamazaki et al. is silent about moving the laser on a second direction parallel to the first direction on the upper part of the layer with an overlapping region. However, this is part of the well-known scanning process as evidence Applicant admitted prior art (Fig. 4A-4C, 27A-27C, pages 7-10).

Yamazaki et al. is silent about the wavelength of the laser beam. However, G. Andra et al. shows employing the argon laser with the wavelength of 514 nm and employing an Nd: YAG laser pulse with the wavelength of 532 nm (pages 639-640).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Yamazaki et al. reference by specifying moving the laser on a second direction parallel to the first direction on the upper part of the layer with an overlapping region as taught by Applicant admitted prior art and the wavelength as taught G. Andra et al. in order to control the size of the grains in the crystallized layer (G. Andra et al., page 639.)

7. Claims 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (U.S. 5,365,080), G. Andra et al. and Applicant admitted prior art as applied to claims 1-18 and 25-30 above, and further in view of Yamazaki et al. (U.S. 5,893,730).

Regarding claims 19-24, the combination of Yamazaki et al., G. Andra et al., and Applicant admitted prior art does not specifically show the semiconductor device as being part of a video camera, a personal computer etc. However, Yamazaki et al. shows that these devices utilize semiconductor devices (Fig. 16A-16F, col. 24, lines 58-67, col. 25, lines 1-47).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Yamazaki et al., G. Andra et al., and Applicant admitted prior art by specifying the use of the semiconductor device as being part of a video camera, a personal computer etc. as taught Yamazaki et al. '730 because these devices utilize the display device taught by Yamazaki et al. '080 (Yamazaki et al. '730, col. 24, lines 58-67).

### ***Response to Arguments***

8. Applicant's arguments filed March 23, 2005 have been fully considered but they are not persuasive. Claims 1-30 stand rejected.

9. Applicant argued that Yamazaki (US 5,365,080), Andra, the admitted prior art, nor any combination of the three describes or suggests forming two crystalline regions using the same laser beam. Applicant argued that Yamazaki describes forming a first crystalline region by irradiating with a first laser beam and forming a second crystalline region by irradiating with a second laser beam having a longer wavelength than the first laser beam. However, the rejected claims do not require that the laser beam should have the same wavelength because the claims recited: "a wavelength of the laser beam falls in the range of 370 through 650 nm". Furthermore, Yamazaki shows forming two crystalline regions using the same laser beam with different pulse durations (Fig. 4(B)-4E, col. 4, lines 65-68, col. 5, lines 1-5, col. 6, lines 1-10).

10. Applicant argued that Yamazaki is silent as to the overlap of different regions in a direction in which a laser moves. However, this is part of the well-known scanning process as evidence Applicant admitted prior art (Fig. 4A-4C, 27A-27C, pages 7-10).

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11. Applicant argued that the limitation "along the first region has been ignored by the rejection. However, the limitations "the first region of the upper surface of the semiconductor film overlaps with **only a portion** of the second region of the upper surface **along the first direction**" have been interpreted according with their plain meaning. Claim terms are presumed to have the ordinary and customary meanings attributed to them by those of ordinary skill in the art. *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003); *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir. 2003)("In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art."). It is the use of the words in the context of the written description and customarily by those skilled in the relevant art that accurately reflects both the "ordinary" and the "customary" meaning of the terms in the claims. *Ferguson Beauregard /Logic Controls v. Mega Systems*, 350 F.3d 1327, 1338, 69 USPQ2d 1001, 1009 (Fed. Cir. 2003). The words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) >; *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004). Any special meaning assigned to a term "must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention." *Multiform Desiccants Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998). See also *Process*

Control Corp. v. HydReclaim Corp., 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999) and MPEP § 2173.05(a).

12. The rejections of the claims are maintained because the limitations i.e., “the first region of the upper surface of the semiconductor film overlaps with **only a portion** of the second region of the upper surface **along the first direction**” do not distinguish the claims from the prior art. According to a definition from Webster’s dictionary “overlap” means to lie or extend over and cover part of; to have an area or range in common with; coincide partly with; to lie over and partly cover something. There is not evidence on the specification that the applicant intended to use the term with a different meaning. Therefore, the claims stand rejected.

13. Furthermore, during patent examination, the pending claims must be “given ~~the~~ their< broadest reasonable interpretation consistent with the specification.” > In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). While the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. > In re American Academy of Science Tech Center, F.3d, 2004 WL 1067528 (Fed. Cir. May 13, 2004).

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Imahashi et al. (U.S. 5,413,958) (of record) and Asai et al. (U.S.



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5,365,875) (of record) are cited as evidence to show that that moving the laser on a second direction parallel to the first direction on the upper part of the layer with an overlapping region is conventional in the art.

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Guerrero whose telephone number is 571-272-1837.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 2, 2005

  
**MARIA F. GUERRERO**  
**PRIMARY EXAMINER**